

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014773**Date Inspected:** 12-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Gao Zhi Chun		
Inspected CWI report:	Yes	No	N/A
Electrode to specification:	Yes	No	N/A
Qualified Welders:	Yes	No	N/A
Approved Drawings:	Yes	No	N/A

CWI Present:	Yes	No
Rod Oven in Use:	Yes	No
Weld Procedures Followed:	Yes	No
Verified Joint Fit-up:	Yes	No
Approved WPS:	Yes	No
Delayed / Cancelled:	Yes	No

Bridge No: 34-0006**Component:** Tower Components**Summary of Items Observed:**

On this date Caltrans Office of Structural Materials Quality Assurance Inspector, Sandeep Kumar (QA) was present during the times noted above for observations relative to the work being performed.

BAY#10

The following Non Destructive Testing (NDT) inspection carried out as per the ZPMC submitted Notification No. 005962

Visual Inspection Testing (VT)

This QA inspector performed VT of the area previously tested and accepted by ZPMC Quality Control personnel. The member is identified as Tower Component. The identified component and weld designations reviewed are as follows:

PAD EYE; SKIRT PLATE

ND1 – A501A/E – 6; 9
ND1 – A501B/E – 7; 8
ND1 – A501C/E – 5; 6
SD1 – A440A/E – 2; 3
SD1 – A440B/E – 3; 4
SD1 – A440C/E – 1; 2

WELDING INSPECTION REPORT

(Continued Page 2 of 4)

Magnetic Particle Testing (MT)

This QA inspector performed MT of the area previously tested and accepted by ZPMC Quality Control personnel.

This QA Inspector generated an MT report for this date. The member is identified as Tower Component. The weld designation reviewed as follows:

PAD EYE; SKIRT PLATE

ND1 – A501A/E – 6; 9

ND1 – A501B/E – 7; 8

ND1 – A501C/E – 5; 6

SD1 – A440A/E – 2; 3

SD1 – A440B/E – 3; 4

SD1 – A440C/E – 1; 2

This QA Inspector observed the following work in progress

Shielded Metal Arc Welding (SMAW):

Weld joint # 3A located on Lift-5 Splice Plate Stiffener NSD1 – SPSA5 – 6. Welder is identified as 044511.

ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 1A located on Lift-5 Splice Plate Stiffener SSD1 – SPSA5 – 6. Welder is identified as 050266.

ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

Weld joint # 3A located on Lift-5 Splice Plate Stiffener NSD1 – SPSA5 – 16. Welder is identified as 057258.

ZPMC Quality Control (QC) Inspector is identified as Yu Zhi Lai. The welding variables recorded by QC appeared to comply with the WPS – B – T – 3211 – Tc – U5b – 1.

This QA Inspector observed the following work not in compliance:

Description of Incident:

During Magnetic Particle Testing (MT) review of welds on Diagonal Plate, CD corner – North Tower Lift-4, this Quality Assurance Inspector (QA) discovered the following issues:

- Cluster of Transverse linear indications measuring approximately 2mm to 5mm in length.
- The member is identified as Diagonal Plate.
- The weld is identified as NSTL4 – 3B/L – 20.
- The weld is a Partial Joint Penetration (PJP) T-joint joining the Diagonal plate to Skin “C”.
- One (1) longitudinal indication measuring approximately 10mm in length.
- The member is identified as Diagonal Plate.
- The weld is identified as NSTL4 – 3J/L – 70.
- The weld is a Partial Joint Penetration (PJP) T-joint joining the Diagonal plate to 139M Double diaphragm.
- The member is Non-Seismic Performance critical Member (SPCM).
- The member is located in TOWER Bay 10.

The Notice of Witness Inspection Number (NWIT) is 005962. The indication is located inside the area that has been previously tested and accepted by ZPMC Quality Control (QC) personnel. As per the contract documents, ZPMC’s QC personnel are required to perform 100% MT inspection of these welds.

WELDING INSPECTION REPORT

(Continued Page 3 of 4)

Applicable reference:

Special Provisions Section 8.3 – “Quality Control (QC) shall be the responsibility of the Contractor. As a minimum, the Contractor shall perform inspection and testing of each weld joint prior to welding, during welding, and after welding as specified in this section and to ensure that materials and workmanship conform to the requirements of the contract documents.”

AWS D1.5 (02) Section 6.26.2 – “Welds that are subject to MT in addition to visual inspection shall have no cracks.”

This QA notified ZPMC QC identified as Mr. Gao Zhi Chun and ABF inspector identified as Mr. Yang Yi Heng of the above issue and that an incident report will be generated.

For further information see attached pictures:-

BAY#11

This QA Inspector observed the following work in progress

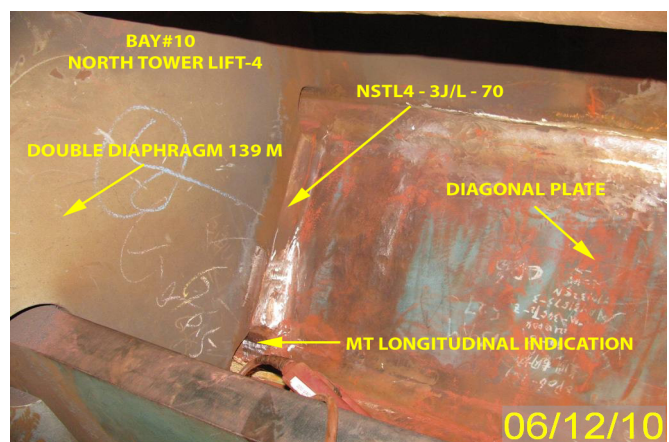
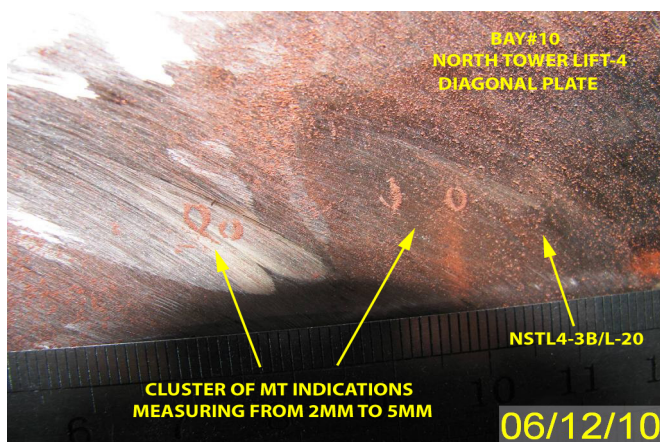
Shielded Metal Arc Welding (SMAW):

Weld joint # 43 located on Tower Strut SD1 – STSA4 – 5 – 143M – 1. Welder is identified as 040611. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 2113.

Repair welding of weld joint # 5B located on Tower Strut SD1 – STSA4 – 5 – 139M – 1. Welder is identified as 041271. ZPMC Quality Control (QC) Inspector is identified as Yu Dong Ping. The welding variables recorded by QC appeared to comply with the WPS – 485 – SMAW – 2G (2F) – FCM – REPAIR – 1.

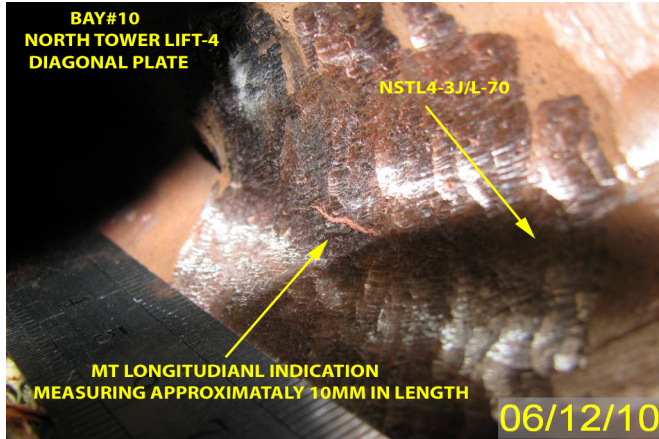
Weld joint # 32 located on Tower Strut wD1 – STSA4 – 5 – 143M – 1. Welder is identified as 25119. ZPMC Quality Control (QC) Inspector is identified as Liu Dao Feng. The welding variables recorded by QC appeared to comply with the WPS – B – T – 4113 – 1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



WELDING INSPECTION REPORT

(Continued Page 4 of 4)



Summary of Conversations:

No Relevant Conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Michael Ng - 15921845703, who represents the Office of Structural Materials for your project.

Inspected By:	Kumar,Sandeep	Quality Assurance Inspector
Reviewed By:	Clifford,William	QA Reviewer
